SMART SURVEY DESIGN

This guide provides information on writing successful and effective survey questions, creating survey flow and layout, calculating response rates, tips for increasing response rates, and the pros and cons of online surveys. (Plus an appendix of links and works cited for additional help in survey design.)

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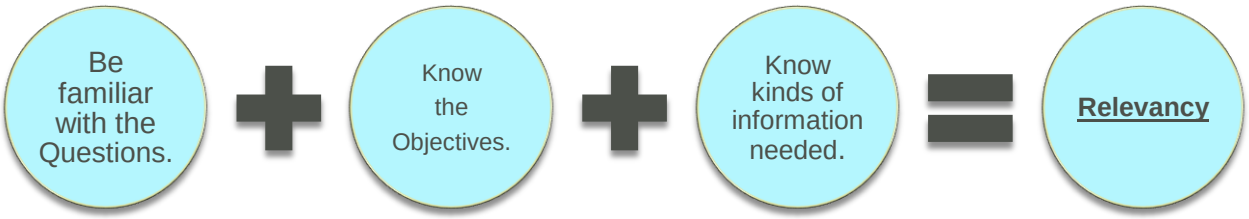
I: INTRODUCTION: RELEVANCY AND ACCURACY

Writing solid and unbiased surveys may seem like a daunting and unapproachable task. However, it is not as overwhelming as one may think! Creating well structured, simply written questions will help in collecting valid survey responses. An important goal as a survey author is to construct clear, direct questions and answers using the language that survey participants will understand. While there are no set rules on the wording of these survey questions, there are some basic principles that do work to improve the overall design. The intent of this guide is to provide tips on utilizing those principles for constructing effective surveys that collect accurate and valid data.

Relevancy and ***accuracy*** are two ideals that encompass the main outcome of creating reliable surveys. These two principles work together to write effective survey questions. To achieve relevancy, keep the following factors in mind (Iarossi 2006, 27):



The kinds of questions a survey author should create are based on two things: the ***objectives*** of the survey and the ***information*** to be collected. A goal of the author is to then turn those research objectives into a set of "information requirements." From here, one can create questions that will produce that information (Brace 2004, 11-12). An **accurate** survey is one where the questions collect the data in a reliable and valid way. If the questions ask respondents things they do not know, then it can result in inaccurate data. To enhance the accuracy of respondents' answers, take into consideration the following items (Iarossi 2006, 28):

- Address the wording style, type, and question sequence.
- Make the survey interesting and notice the survey length or how long it takes to answer the entire survey.
- When designing a survey, the author should try to put him/herself "in the position of the typical, or rather the least educated, respondent." (Moser and Kalton 1971, 320)

Some additional things to consider about the relevancy and accuracy of survey questions are the ways in which the questions are written and their overall length. Writing

clear, direct, and brief questions will help the survey respondents to know exactly what you are asking. By making sure that the questions asked do not have more than one possible meaning also helps in preventing respondents' confusion. Asking sensitive questions in alternate ways may help to alleviate respondents' concerns. For example, many people may feel that income, age, lifestyle habits, etc. are personal and may not want to disclose that information. So when collecting a respondent's age, a person may be more willing to indicate what year s/he was born rather than to state an actual age. Finally, take into consideration the capability of your survey participants. Some participants may not be able to accurately answer certain questions. If you are surveying employees, perhaps they cannot recall certain details of a project carried out years ago. Or if you are surveying a consumer product, respondents may not remember specific features about it ("Survey Planning").

A. Question Intent:

Well-understood questions increase both the accuracy and frequency of survey respondents' answers. While creating survey questions, keep these two fundamental questions in mind in regards to the intent behind the questions and the data you want to collect (Iarossi 2006, 44):

- Will respondents be able to understand the question?
- Will respondents be able to answer the question?

The legibility and relevancy of these questions will therefore play a key role on impacting each individual question's intent. By sticking to these three following suggestions, you may increase the accuracy and frequency of respondents' answers:

1. **Use legible questions** – Ask questions that read well and are quick and easy to answer. This may help to keep the respondents from jumping to an answer before the question is completely read. Avoid writing questions in a complex structure; sometimes the longer the list of questions/answers, the lower the quality of the data (Iarossi 2006, 44).

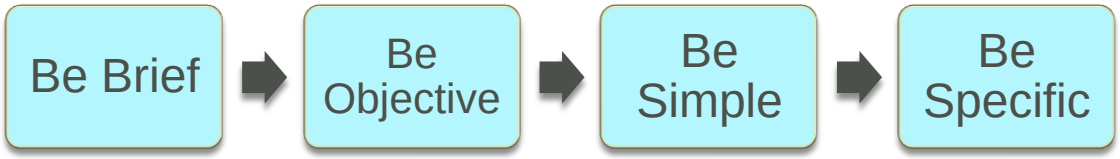
2. **Use relevant questions** – Make sure that all questions asked are relevant to all respondents and the survey's purpose. In addition, avoid hypothetical questions (Iarossi 2006, 44).

3. **Use painless questions** – Questions asked in your survey should require a small amount of effort to answer. Most people prefer to answer and complete surveys quickly without thinking too hard or spend a lot of time. If the survey is too long or becomes tiresome, respondents may adopt strategies to get to the end of the survey as quickly as possible. For example, with repeated rating scale type questions,

respondents may get into a pattern of response that does not reflect their actual thoughts. They may simply just click the 1st rating scale every time to answer every question and finish the survey quickly (Brace 2004, 18).

B. Constructing Good vs. Bad Questions:

Each survey question has a unique need. Because of this, there is no universal right or wrong of "question wording." However, there are ways to construct good vs. bad ones. The following four criteria can help you when wording and structuring your questions (Iarossi 2006, 30-44):



1.) **Be Brief** – Keep questions short and ask one question at a time. Longer questions may quickly become confusing, thus resulting in a misread of what you are asking. *Remember: Brevity's goal is to create the shortest way to ask a question without losing its intent. It is not always about reducing the length of the question* (Iarossi 2006, 30-44)*!*

2.) **Be Objective** – As the survey designer, pay attention to the neutrality of the words. This helps to avoid unintentional violation of the survey's objectivity. Here are some tips to avoid violating the objectivity (Iarossi 2006, 30-44):

A. *Avoid leading questions* – Based on their content, wording, or structure, these kinds of questions may lead a respondent towards a certain answer. According to Iarossi, the following three items aid in the creation of leading questions and survey writers should always try and avoid these (33-35):

- Failure to give equal weight to all options.
- The actual set of options offered acts as a source of information.
- The actual list of options provided will influence the respondents, meaning the options that appear in the beginning of a long list have the "primacy effect" and have a higher likelihood of being selected.

A good way to deter the "primacy effect" is to make the answer choices appear in a random order every time the survey opens up to a new respondent. This can

be accomplished with the "randomized answers" option as a Professional subscriber in SurveyMonkey.

Example of Leading Question Bias:

Example: We have recently upgraded SurveyMonkey's features to become a first class tool. What are your thoughts on the new site?

Replace with: What are your thoughts on the upgrades to SurveyMonkey?

B. *Avoid loaded questions* – This type of answer bias works through emotionally charged items like words, stereotypes, or prestige images. When creating the survey, avoid words that may "cater to the respondent's ego or contort the respondent's pride." This may result in pushing the respondent towards a particular answer (Iarossi 2006, 30-44).

C. *Avoid built in assumptions* – When creating survey questions, avoid questions that assume the respondent is familiar with the specifications asked within the questions (Iarossi 2006, 30-44).

3.) **Be Simple** – The survey should use language that is simple in both words and phrases. The following are some helpful points to remember for question simplicity (Iarossi 2006, 30-44):

- Use words and expressions that are simple, direct, and familiar to all Respondents.
- Avoid technical jargons or concepts.
- Adopt the same definitions throughout the form.
- Avoid Negative or Double Negative Expressions. The use of universal words or "absolutes" like "always" or "never" may cause the respondents to avoid answering a question. These tend to extend the question to an extreme. In addition, try not to use words such as "only" or "just." These could be perceived negatively worded by the respondents ("Writing Survey Questions").
- Avoid using Double-Barreled questions. Double-Barreled questions split questions into more than one part, idea or meaning. The answer choice for each part might have separate meanings to the ideas presented within the one question. These may lead the respondent to answer only one aspect of it; ultimately leading him/her to fail in answering both aspects of the question. ("Writing Survey Questions").

Example of a Double-Barreled Question:

Example: "How useful do you find SurveyMonkey's Help Center Topics and the email support center?"

Replace with:

Question 1: "How useful do you find SurveyMonkey's Help Center Topics?"

Question 2: "How useful do you find SurveyMonkey's email support?"

4.)**Be Specific** – Ask precise questions. Avoid things that are too general, too complex or undefined. Stay away from using words like "often," "usually," "generally," etc. Each person's thought process is different and some people may infer a different meaning. "Often" to one person may be once or twice a week and to someone else it could be a few times a month. Do not use abbreviations and spell words out when necessary so it will not lead to potential confusion for the respondents (Iarossi 2006, 30-44).

II: SURVEY QUESTION TYPES AND SURVEY STRUCTURE

A. Question Types:

The types of survey questions used in a survey will play a role in producing unbiased or relevant survey responses. As the survey designer, consider the types of questions to use and when it is appropriate to use them. Question types range from open-ended (comments to essays) to closed-ended (yes/no, multiple choice, rating scale, etc). In the end, it is the question types that determine what type of information is collected.

You may also want to consult with a statistician if you are unsure as to where to begin (e.g. www.StatisticallySignificantConsulting.com) at the design phase of your study. This may help ensure that your data and research questions will lend themselves well to statistical analysis (Creech, Steve 2007). To view examples of the types of questions SurveyMonkey offers, please visit our homepage and access the "types of questions" example link.

1. Open-Ended Types:

Open-ended questions are those that allow respondents to answer in their own words. In an online survey, textboxes are provided with the question prompt in order for respondents to type in their answer. Open-ended questions seek a free response and aim to determine what is at the tip of the respondent's mind. These are good to use when asking for attitude or feelings, likes and dislikes, memory recall, opinions, or additional comments. However, there can be some drawbacks to using open-ended questions (Brace 2004, 55-62):

- Sometimes respondents may find it difficult to express their feelings. This can result with respondents answering "I don't know" or skipping it.
- They do take more time and effort to fill out and at times they can have a larger skip rate.
- In addition, analyzing open-ended comments can be time consuming and difficult. We have aimed to make that process a bit easier for Professional subscribers by offering a few summary spreadsheet formats in Excel, HTML, or downloading individual questions into a PDF.

2. Closed–Ended Types (Multiple Choice – One Answer or Multiple Answers):

Closed-ended questions are those with pre-designed answers with a small or large set of potential choices. One type of closed-ended question is a "dichotomous" question which allows respondents to choose one of two answer choices (e.g. Yes or No), while

another type is the "mutli-chotomous" question, which allows respondents to choose one of many answer choices (Brace 2004, 55-67).

Let's consider this example that asks similar information but uses different question types to ask for the information:

Question 1: *Have you used SurveyMonkey in the last year to send out a survey?*

- ❍ Yes
- ❍ No

Question 2: *How many times in the last year have you used SurveyMonkey to send out a survey?*

- ❍ Zero
- ❍ Once
- ❍ Twice
- ❍ Three or more times

Question 3: *If you had to estimate, how many times have you used SurveyMonkey to send out a survey? (Please write in an estimate number)* _____

In this example, Question 3 (the open-ended question type) provides the most detail. Here a respondent can type in the actual number or the estimated number of times s/he has used the tool. The first type, Question 1 example, is the best for setting up a skip logic scenario, consent form, or for basic/general information gathering. For closed-ended questions, like Question 1 and 2, it is important to create answer choices that cover all possible answers that are expected from that question. If you make the choices mutually exclusive (or unable to all be true at the same time), then the participant is able to choose the best possible answer ("Survey how to").

2. Ranked or Ordinal Questions:

Ranking questions are best to use when all the choices listed should be ranked according to a level of specification (e.g. level of importance). If you have a question in which you need the respondents to indicate what items are the "most important" to "least important," then you can set up a ranking question (Waddington 2000). In this example on page 11, you can create a Rating type question in SurveyMonkey and set the "forced ranking" option. This allows only one row (answer choice) to have that rating applied. Example: If you choose "survey templates" as your 1st choice, then no other row can be selected as the 1st choice. The Forced Ranking option won't allow it.

Example: Please rank the items from 1 to 5 according to what is most important when looking for an online survey provider.

	1st choice	2nd choice	3rd choice	4th choice	5th choice
Survey templates	❍	❍	❍	❍	❍
Multi-lingual Support	❍	❍	❍	❍	❍
More customization	❍	❍	❍	❍	❍
Multiple logins	❍	❍	❍	❍	❍
More export formats	❍	❍	❍	❍	❍

3. Matrix & Rating Types:

The matrix & rating type questions are used when surveying the frequency of something like behavior or attitude. It is best to present the rating scale in a logical or consistent order. Therefore, it makes sense to order the ranking or rating choices from low to high (e.g. Strongly Disagree to Strongly Agree going from left to right).

If you set up the rating scale in your survey in this format of "Strongly Disagree" to "Strongly Agree," make sure that the rest of the survey is consistent and all rating scales go from the low to the high frequency throughout (or vice versa). In addition, some surveys may only label the outliers or endpoints of the scale, but it is good practice to assign a label or number to each rating scale.

Please note: Some studies have shown that whether verbal descriptors are used only at endpoints or at every scale point, it may affect the distribution of the data collected either way (Meric, H. and J. Wagner 2006, 3).

Example: Without Descriptions on Every Rating Scale:

Please answer the following about SurveyMonkey.

	1 - Strongly Disagree	2	3	4	5 – Strongly Agree
It is easy to use.	❍	❍	❍	❍	❍
It is fun.	❍	❍	❍	❍	❍

(See the next page for example on adding descriptive text to each column)

Replace with: Descriptions on Every Rating Scale:

Please answer the following about SurveyMonkey.

	1 – Strongly Disagree	2 - Disagree	3 – Neutral	4 – Agree	5 – Strongly Agree
It is easy to use.	❍	❍	❍	❍	❍
It is fun.	❍	❍	❍	❍	❍

The two common types of matrix-rating scales are called likert and semantic differential scales. Rating scales are popular ways of collecting subjective data where you want to measure a respondent's ideas (e.g. opinions, knowledge, or feelings). When creating rating scales, likert scales in particular, consider if you want the scales to be balanced or unbalanced. The following sections discuss these two scales and the difference between balanced vs. unbalanced scales.

a. Likert Scales:

A likert scale is considered an "agree – disagree" scale. This setup gives respondents a series of attitude dimensions. For each dimension, the respondent is asked whether, and how strongly, they agree or disagree to each dimension using a point rating scale. Likert scales are given scores or assigned a weight to each scale, usually from 1 to 5. The purpose of the likert scale is to sum the scores for each respondent (the response average), and the intent of the likert is in that the statement will represent different aspects of the same attitude (Brace 2004, 86).

Example of Likert Scale:

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
The new tool is improved	❍	❍	❍	❍	❍

b. Semantic Differential Scales:

The semantic differential scale is one that has opposite ends of the scale marked with two different or opposing statements. Respondents are then asked to indicate the area in which they fall on the scale. Unlike the likert scale, the semantic types do not have to have a "statement" that is semantically identified for each rating along the scale. It is

typically recommended to use a seven–point scale for these types. It is also good to keep the statements on the opposite ends short and precise (Brace 2004, 89-90).

NOTE: Currently SurveyMonkey does not provide this format in our available question types. We are working on some feature requests and hope to have this offered in the future. You could create a Rating/Matrix question and label the columns 1 – n and add descriptive text only to the first and last column, but you won't be able to put descriptive text on the left and right side of the scale.

General Example of a Semantic Differential Scale:

To what extent do you feel that SurveyMonkey has been improved? Please answer along the following scale:

Improved 1 2 3 4 5 6 7 **Unimproved**

4. Balanced vs. Unbalanced-Rating Scales:

A five-point rating scale typically gives sufficient discrimination and is easily understood by survey participants. This is usually recommended for most survey settings (Brace 2004, 82). However, there is no set limit on the number of categories to use. Using too few could give less-cultivated information, while using too many could make the question hard to read and answer. Related to this setup is the decision of incorporating a "middle category." The content and analytical purpose of the question will determine if you want to create a balanced vs. an unbalanced rating scale. If a rating scale is balanced, it means it is composed of an equal number of positive and negative labels anchored by opposite poles, with or without midpoints (Meric, H. and J. Wagner 2006, 4).

Example 1 Balanced:

Very Poor	Poor	Average	Good	Excellent
1	2	3	4	5

Example 2 Unbalanced:

Poor	Average	Good	Very Good	Excellent
1	2	3	4	5

In Example 1 you see **2 positive** and **2 negative** statements with a neutral midpoint. For this case, respondents are not led in either direction. However, in Example 2 there are **3 positive** statements and only **2 negative** statements. In this case, the more positive

statements tend to be selected. If you want to avoid potential bias it is good to balance the scale (Brace 2004, 81).

There are some occasions in which an unbalanced scale is suitable. For example, in a customer satisfaction survey, few customers may say that something is "unimportant." In the example scale below, the "important" will become the midpoint. In this scenario, you are trying to obtain a degree of discrimination between the "levels of importance" (Brace 2004, 82):

- Not Important
- Neither Important nor Unimportant
- Important
- Very Important
- Extremely Important

Here is where you decide if you want to provide a "neutral" middle category to your scale. If a neutral choice is a possibility, then you may want to include a midpoint answer choice. However, if you want the respondent to take one side over the other, then an even number of categories is suggested. This will force respondents away from the neutral response (Iraossi 2006, 61). Some people agree that it is best to force the respondents in one direction or the other. If you choose the unbalanced form and force respondents away from the neutral alternative, then as the researcher be careful that this will not introduce bias into the data (Brace 2004, 84).

One final item to think about is a "Not applicable" or N/A answer choice provided in the matrix-rating questions within SurveyMonkey. By allowing respondents to opt out due to non-familiarity with the question or if it does not apply to their situation, this will help increase the response rate and quality of the collected data (Iraossi 2006, 61). Please note: the "N/A" rating scale option is not included in the calculation of the response average for the matrix-rating types in SurveyMonkey.

B. Question Sequence:

A good survey design should help to stimulate recall (if necessary); it should motivate the respondent to reply; and the survey should flow in an orderly fashion. The sequence of questions will help to create a certain flow to the survey. This flow will also ease or arouse the respondent's interest and overcome his/her doubts about the survey's intent. As a general guideline, there are three areas regarding question sequence: opening questions, question flow, and location of sensitive questions.

1. **Opening questions** – The first few questions in the survey should be easy and interesting in order to calm any participants' suspicions about the survey's integrity. This allows the participants to build up confidence in the survey's objective. In return, this may stimulate their interest and overall participation (Iraossi 2006, 74-78).

2. **Question flow** – The question sequence in the survey body should take on a flow of ideas and be geared towards the respondents' abilities. After you have established the first general topic, all related questions should come up before a second topic is raised. It is a good idea to use "pages" in the online design to house each different section of the survey. Here you can raise one topic on one page and include the instructions/information for this section in the Page Description area. When you are then ready to introduce a new topic to the survey, you can create a new or second page to include that page's description and purpose. Conditional or Skip Logic questions are also a good way to control the respondent's flow or route through the survey. You can apply question or page skip logic to the survey when you want to guide respondents and exclude them from certain pages of questions that do not apply to them (Iraossi 2006, 74-78).

3. **Location of sensitive questions** – Some suggest that sensitive questions should not be included at the beginning of the survey. However, there are no set rules on this. If you do include sensitive questions at the beginning of the survey, then you may run into respondents rejecting the survey and exiting early. They may not have built up confidence yet in the survey's integrity quite so early. Questions like demographics or personal information are usually best to introduce towards the end of the survey. This way, respondents are likely to have already developed confidence in the survey's objective (Iraossi 2006, 74-78).

C. Survey Layout:

1. Basic guidelines:

a. Introduction:

When designing your survey structure, the overall format and layout is important from beginning to end. A poorly organized survey may cause respondents to skip questions or completely opt out of answering your survey. It is good practice to begin your survey with an introduction that explains the survey's purpose. Within the introduction, you may want to include the name of the organization conducting the survey, the confidentiality information, and how the data collected will be used. Many participants like some kind of assurance in regards to their responses; providing that kind of information before the survey starts can

help ease those concerns. You may also want to provide an estimate of how long the survey might take or whether you are offering any kind of incentive or prize for taking the survey. Remember to deliver on your promised gift! If you provide this information up front it usually leads to honest responses and more completed surveys.

Providing general instructions on how to progress through the survey in the introduction or within each new section is important in letting your audience know how the survey works. From here respondents will not have to look back and forth in the survey to see what they are supposed to do (Warwick and Lininger 1975). You can include something like the following in the Introduction section or the first part of your survey:

"Thank you for taking the time to complete this survey by 'My Company.' Your feedback is important to us in how we can better improve our site. This survey should only take about 5 minutes of your time. Your answers will be completely anonymous and by filling out our survey you will be entered into a drawing for a $10 gift card.

In order to progress through this survey, please use the following navigation links:

- *Click the Next >> button to continue to the next page.*
- *Click the Previous >> button to return to the previous page.*
- *Click the Exit the Survey Early >> button if you need to exit the survey.*
- *Click the Submit >> button to submit your survey.*

If you have any questions, please contact us at support@mycompany.com or call 800.555.1234"

This sample introduction might help you get started in how you can create a simple and straightforward beginning to a survey.

Please note: If you are a UK client, you will need to be aware of the Data Protection Act 1998. To be in accordance with this act, the following items must be addressed in the survey's introduction: the name of the organization conducting the survey and how the data will be handled (i.e. confidential, personally identifiable for database building or direct marketing, etc.) (Brace 2004, 174).

For further information regarding the Data Protection Act 1998 for UK clients please visit the following site: http://www.opsi.gov.uk/ACTS/acts1998/19980029.htm (Crown Copyright 1998).

b. Body of the Survey Design:

The use of space throughout the survey is also important. Trying to fit too much information (e.g. too many questions) on a single page may cause respondents to struggle through the survey. If your survey has multiple sections or parts, then it is good to introduce each new section as suggested previously. Keep in mind to make the sections and questions flow in a sequential order that makes sense to the respondents (Brace 2004, 154).

You are the survey author and designer, so you can make it as visually interesting as you would like! If you are a Professional subscriber with SurveyMonkey, you will be able to customize the survey according to your needs. Here are some tips to remember when designing the look of your online survey (The following is taken from "Organizing and Formatting surveys"):

1. Make the survey visually appealing and user-friendly.
2. Try not to use small fonts or fonts that are not easy to read. Some participants may have a difficult time reading small print.
3. To avoid clutter, use white space.
4. Ask only one question per line. If it makes sense you can place questions side by side using our tool.
5. Group similar question together or in the same area of the survey.
6. Ask interesting questions in the beginning of the survey to grab the participants' attention. This helps to stimulate interest.
7. Place demographic and/or sensitive questions at the end of the survey. If they are in the beginning, participants may opt out early.
8. Finally, test the survey before going live. A small sample of test respondents can help verify if your survey is working properly. This enables you to revise and edit questions and the survey design.

c. End of Survey or Thank You Page:

Once your respondent has reached the end of your survey, you can create a Thank You page. Here you can thank the respondent for their time. Also, let them know that once they click the "Done" or "Submit" button, their survey response will be submitted. This may help to build rapport with the respondent; possibly increasing the likelihood that they will participate in your future survey invites. SurveyMonkey does have a Thank You page option for your survey. This is located under the Collector's Settings. In addition, if you are a Professional subscriber, you can also utilize the redirect option located under these settings. Here when a respondent clicks the "Submit" button on your survey, you can set it up to redirect them to your own organization's website. This way the respondent will know your organization and know the survey has been successfully submitted.

2. Layout for coding and identification:

As the designer of the survey, pay attention to the physical layout of the survey to reduce the likelihood of errors on the respondents' end or on your end regarding areas of coding or editing. Here are some principles to follow to make the survey logical for all people accessing the survey, as well as easy to identify, code, and store:

1. **Identification** – You can add a unique number or identifier to each questionnaire. This can be done in the Email Invitation collector tool by assigning an ID number as the "custom value" field for each individual email address imported into your email list. You can also append a unique ID number to the anonymous survey link of "create link for email message" if you are using your own email provider (Iraossi 2006, 80-84). This may help you in tracking or identifying your participants.

2. **Numbering** – Questions can be numbered sequentially throughout the survey, even if the survey is divided by pages or sections (Iraossi 2006, 80-84). You can choose to have our tool number the questions throughout the entire survey as a whole or have the questions numbered according to each individual page. This may help you in coding your survey.

3. **Instructions** – General instructions are important for the administration of the survey as well as for the collection of accurate data. The following two types of information ought to be distinguishable in the survey: *questions to be read / answered* and *instructions to be followed*. You may want to customize your survey to include different fonts for the instructions or page descriptions vs. the survey questions themselves. Place any special instructions on either the page description/section or directly above the question itself (Iraossi 2006, 80-84).

4. **Fonts & Formats** – If you want to emphasize important words, then underline or bold them in the survey question or page description. This makes it easier for your respondents to identify key points or items (Iraossi 2006, 80-84). You will need to incorporate HTML code into the survey design to emphasize certain words or phrases. We are only able to offer limited support in your own HTML coding, so knowledge of basic HTML is necessary.

D. Pre-Test:

The pre-test or test pilot of the survey provides two functions. It first serves as the initial "live" test of the survey, and secondly it is the last step in finalizing the survey questions and form. The pre-test is possibly one of the most critical steps in administering a survey. By opting out of conducting a test pilot, you could jeopardize the accuracy of the data. The test pilot offers feedback on whether the survey's wording and clarity is apparent to all survey respondents and whether the questions mean the same thing to all respondents.

The three basic goals of the pre-test are (Iraossi 2006, 89):

1. To evaluate the competency of the questionnaire.
2. To estimate the length of the survey or time to take the survey.
3. To determine the quality of the surveyor.

Checklist of Concerns During the Test Run:

According to Iraossi, the following is a good checklist of concerns regarding the survey and question design that, as the survey designer, you should consider during the test pilot (2006, 90-92):

- Do the respondents understand the survey's objective?
- Do the respondents feel comfortable answering the questions?
- Is the wording of the survey clear?
- Is the time reference clear to the respondents?
- Are the answer choices compatible with the respondents' experience in the matter?
- Do any of the items require the respondent to think too long or hard before responding? Which ones?
- Which items produce irritation, embarrassment, or confusion?
- Do any of the questions generate response bias? Which ones?
- Do the answers collected reflect what you want in regards to the purpose of the survey?
- Is there enough diversity in the answers received?
- Is the survey too long?
- According to your test audience, have any other important issues been overlooked?

III: SURVEY RESPONSE RATES & PROS VS. CONS OF ONLINE SURVEYS

A. Survey Response Rates

(Taken from: http://www.utexas.edu/academic/diia/assessment/iar/teaching/gather/method/survey-Response.php?task=research)

1. Calculating the Response Rate:

The percentage of people who respond to your survey is considered the "response rate." A high survey response rate helps to ensure that the survey results are representative of the survey population. You can calculate the response rate for your survey using the following equation:

$$\frac{Number\ of\ Complete\ Surveys}{Number\ of\ Participants\ Contacted} = Response\ Rate$$

Let's say you contacted 100 people and 40 responded.

You would then have 40 / 100 = .4.

Multiply .4 by 100 to get a 40% response rate for your survey.

2. Determining an Acceptable Response Rate:

To determine acceptable response rates based on the way you are administering your survey you must consider several factors: (Taken from http://www.utexas.edu/academic/diia/assessment/iar/teaching/gather/method/survey-Response.php?task=research)

A. **The Purpose of the Research** – When the objective is to measure effects, then the response rates are more important. If the survey's objective is just to gain insight, then response rates may be less important.

B. **Statistical Analysis** – You will need to understand the statistical techniques associated with the calculations you intend to use. If you are using SPSS or any other kind of statistical program to do in-depth data analysis; you will need to be familiar with those kinds of procedures. In addition, according to Steve Creech, consider taking your study beyond simple descriptive statistics and use inferential

statistics. For a simple explanation of the difference between descriptive statistics and inferential statistics please visit the following site: http://www.statisticallysignificantconsulting.com/Statistics101.htm

Inferential statistics allow you to find out if your results are "statistically significant" or not. For example, you might develop an opinion survey and measure basic demographic characteristics of the study participants such as age and gender. Using inferential statistics, you could determine if there is a statistically significant difference in opinion between males and females, or if the opinion improves with the age of the participant.

In order to use statistical inference effectively, there are several statistical considerations that need to be taken into account when you are planning your survey. Some of these considerations are:
1.) Research questions
2.) Measurement scales
3.) Null and alternative hypotheses
4.) Data analysis plan
5.) Sample size

You may want to consult with a statistician (e.g. www.StatisticallySignificantConsulting.com) at the design phase of your study to ensure that your data and research questions will lend themselves well to statistical analysis (Creech, Steve 2007).

C. **Survey Administration –** The ways in which the surveys are administered play a role in response rates for surveys and these can be relative:
    - Mail: 50% adequate, 60-70% good to very good
    - Phone: 80% good
    - Email: 40% average, 50-60% good to very good
    - **Online: 30% average**
    - Classroom pager: 50+% good
    - Face to Face: 80-85% good

D. **Closeness or Relationship to Respondents** - The better you know your respondents, the more likely you will have a higher response rate.

3. Maximizing Response Rate:

Here are some tips for maximizing the Response Rates (Taken from: http://www.utexas.edu/academic/diia/assessment/iar/teaching/gather/method/survey-Response.php?task=research):

1. Request participation in advance.

2. Include information regarding the following in the Introduction of the survey or in the cover letter:
    - State the purpose of the survey.
    - Give a reason for participation.
    - Give the terms of anonymity and confidentiality and how the results will be used.

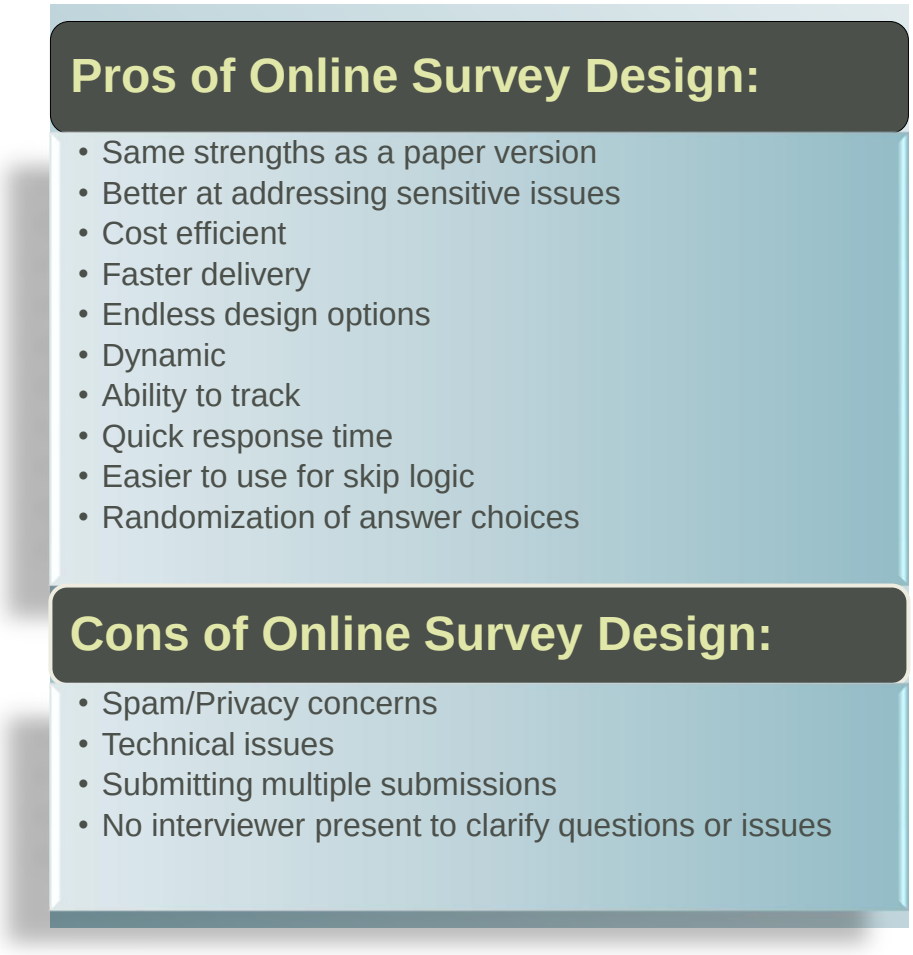
3. Allow enough time to complete the survey. With our tool you can set a cutoff date and time if you do not want to collect responses after a specific date and time.
4. Provide Survey Instructions - Explain how to navigate through and submit the survey plus include instructions for each section if applicable.

5. Design a survey that is easy to follow with clear and direct questions/instructions:
    - Designate sections by creating 'pages' to the survey.
    - Group similar questions together.

6. Send reminders during the survey period for those that have not completed the survey.

7. Offer a gift or incentive for participation. Be sure to deliver the promised gift.
    - Gift Certificates, coupons, etc. Do not offer money as an incentive.
    - Offer to share the summary of the results if you are a Professional subscriber.

B. Pros and Cons of Online Surveys


Pros of Online Survey Design:
• Same strengths as a paper version
• Better at addressing sensitive issues
• Cost efficient
• Faster delivery
• Endless design options
• Dynamic
• Ability to track
• Quick response time
• Easier to use for skip logic
• Randomization of answer choices
Cons of Online Survey Design:
• Spam/Privacy concerns
• Technical issues
• Submitting multiple submissions
• No interviewer present to clarify questions or issues

Pros of Online Surveys:

There are many advantages of using web-based surveys compared to traditional mail or face to face methods. Web-based surveys have the same strength as paper versions in that they allow respondents to take their own time to complete the survey. If it is administered anonymously then online surveys may be better at addressing sensitive questions, because an interviewer is not present asking the questions directly (Brace 2004, 38-39). Email is less expensive and it brings an end to the slower mail process. It is also a faster transmission of the survey itself to the participants, and the results come back faster to you, the researcher. In addition, web-based surveys are sometimes seen as "environmentally friendly" due to the online format's non-use of paper (Yun, G.W. and Trumbo, C.W 2006).

Interesting and good graphics are important elements in paper based surveys, but an online survey can truly present well laid out and visually pleasing survey designs. Web surveys can utilize colors, images, and hyperlinks. Web surveys are also dynamic, which means they can provide statistical results on an immediate basis. Our tool provides statistical results immediately in the **Analyze** section as soon as a respondent submits his/her survey. In addition, the actual response time of participants is fairly quick for online surveys that are delivered through email. Many people will answer the survey within few days of receiving the email invite, and in some cases you will see a large number of responses the day you send out the email invitation (Yun, G.W. and Trumbo, C.W 2006).

Another benefit of using email to collect responses is the ability to track your respondents. You, the researcher, can track who has or has not responded and who has declined. You can also track the email address or name associated with the individual survey response (Sheehan, K. 2001). Our tool offers this advantage through the use of the Email Invitation collector.

The online survey tool can administer skip logic techniques easier than a paper based survey. This is done by routing respondents automatically to a page of follow-up questions based on the answer choice they have selected. The logic is triggered in our tool when a respondent clicks the "Next" button on the bottom of the page.

A final advantage of using online surveys is the use of "randomized answer choices." That is a premium feature for Professional subscribers in SurveyMonkey. Here the survey can pull up the answer choices in a randomized order every time the link is accessed by a new respondent. This may help in alleviating question choice bias, and to deter the case where a person is simply clicking the first answer choice for every question to quickly get through a survey.

Cons of Online Surveys:

We would like for you to be aware of the possible "cons" or issues that may arise from implementing an online survey. People may feel that emailed surveys raise ethical concerns and can be intrusive. Sending unsolicited emails (or too many emails) may invade a person's privacy (Yun, G.W. and Trumbo, C.W., 2006). In response to this, we have established a very strong privacy policy, and an anti-spamming agreement is established when using the SurveyMonkey email to send out the invite messages.

To address the issue of intrusion, we have included the "opt out" or Remove Link field in the email message that is delivered by SurveyMonkey. When a respondent clicks on the remove link in an Email Invitation message, s/he is globally opted out of the lists in the subscriber's account. The subscriber or account holder will not be able to add the opted

out emails back into any lists. If a respondent mistakenly opts out, then we do offer a way for him/her to opt back into the list(s) on our homepage through the Opt Out/Opt In link.

Non-delivered email or messages rejected as SPAM can sometimes be a concern for survey authors. We do provide our IP addresses to give to your IT department if internal email invites are being blocked. This will help you configure your server to allow the emails to be received. To learn more about creating effective survey invitations with less spam language, please click here.

To address the multiple survey submissions, our tool offers different survey settings that rely on cookies (for the anonymous or web links) or by the new function of the survey link delivered in the Email Invitation collector to help control multiple submissions. You can utilize the Email Message section to send out survey invites and track respondents by their email address. If you opt to an Email Invitation collector in SurveyMonkey, the link will not allow anyone to submit additional responses. This link no longer works through the use of cookies. The link will only allow the respondent to answer the survey once; even if he/she access the survey from a different computer.

One final thing that researchers must take into consideration is that the Internet is not always a perfect world. Please be aware that there are potential technical glitches that may arise on your end, on our end, on your survey respondent's end, or at any step in between. Our computers, the survey author's computer, and the respondent's computer may all be functioning at 100% but one of the nodes that routes the data between these computers may not be functioning. Many times a survey respondent's Internet provider may be experiencing issues, or his/her computer or web browser may not be configured properly. If there is ever a server issue or technical issue on our end we will promptly address it, fix it, and get you back up to speed! We do have an extremely strong track record of performance and we are listed as one of the leading online survey tools.

V: COLLECTING DATA AND PRIVACY BEST PRACTICES

1. Inform your respondents about how their responses will be handled.

It is always good to disclose your privacy practices to your respondents. Doing this helps to increase response rates by putting potential respondents more at ease. You can disclose your privacy practices on the introduction page of your survey, or in the body of any email message containing the link inviting recipients to take your survey. If you are conducting a survey for an organization which already has its own privacy policy, you may wish to link to it if it is relevant. Alternatively, you can just describe your privacy practices in full on the introduction page of the survey itself.

Privacy statements should detail at least the following things:

- **What personal information you are collecting**: Identify whether you are collecting the responses anonymously or tracking by email address, by ticket number, etc.). Outline the types of personal information the survey asks for.
- **How you plan to use the responses**: Why are you conducting your survey? What are you going to do with the survey results?
- **Whether responses will be disclosed to anyone else**: If you don't want anyone to have access to your data, do not share your SurveyMonkey account with others and ensure that your survey is configured such that survey results are not public.
- **How respondents can access their responses**: Can respondents access their responses to correct their responses, or request that any personal information collected about them be deleted?
- **How respondents can contact you**

You may also wish to link to SurveyMonkey's Privacy Policy and Security Statement to disclose how we handle respondent data on your behalf.

2. Streamline the amount of personal information you collector.

Collect only the minimum amount of personal information necessary to achieve your purposes. Try to avoid asking for sensitive information in your surveys.

3. Use an encrypted survey link to distribute your survey.

We offer SSL encryption. This feature ensures that responses are communicated securely to SurveyMonkey's servers.

4. Be aware of your own privacy requirements.

Many organizations are themselves regulated by data privacy laws and regulations, as well as internal policies. You should ensure that you are familiar with these, as you will be responsible for ensuring that your survey complies with these requirements.

V: SECTION 508 & ACCESSIBILITY

1. Making your Surveys Accessible and 508 Compliant

SurveyMonkey is a Section 508 compliant online survey application. We ensure that, by using our standard survey designs, your survey will meet all current US Federal Section 508 certification guidelines.

Section 508 of the Rehabilitation Act of 1973 is a federal law that outlines requirements for making online information services accessible to users with disabilities. You can access the government web site that outlines the requirements and helpful links regarding section 508 here (http://www.section508.gov/index.cfm?FuseAction=Content&ID=3). All Federal agencies are required to use 508 certified software and technologies when available.

We believe that it is important for our customers to be able to reach the broadest range of potential respondents possible to provide you with the most accurate results. It is estimated that there are 54 million people in America living with a disability. Being able to access feedback from this demographic will allow you to more effectively address the concerns and views of a more representative population.

Our developers have updated our survey design system across the board so all standard survey designs are accessible for respondents with disabilities without changing the appealing look or function of your survey.

A. RampWEB Web Accessibility Consulting:

To achieve compliancy we worked closely with the RampWEB Web Accessibility Consulting (http://www.RampWEB.com) group who **certified us as Section 508 compliant on June 5, 2008**. RampWEB is the industry leader in web accessibility and is one of the most trusted names in accessibility certification. For more information on **RampWEB Web Accessibility Consulting**, please click here.

The **Voluntary Product Accessibility Template**, or VPAT's purpose, is to assist Federal contracting officials and other buyers in making preliminary assessments regarding the availability of commercial "Electronic and Information Technology" products and services with features that support accessibility. The VPAT was developed by the Information Technology Industry Council (ITI) in partnership with the U.S. General Services Administration (GSA).

To view SurveyMonkey's VPAT, please click the following link:
http://s3.amazonaws.com/SurveyMonkeyFiles/VPAT_SurveyMonkey.pdf

We were fortunate enough to be able to collaborate with one of RampWEB's top accessibility consultants, **Jim Thatcher** (http://www.jimthatcher.com/index.htm), a pioneer

in accessibility whose efforts have helped create many of the 508 standards in use today. You can get more information about Jim Thatcher by clicking here (http://www.jimthatcher.com/index.htm). With their help in design, consultation and implementation of the latest web accessibility standards, we have created user-friendly survey formats accessible with a broad range of disability software.

B. Creating Screen Reader – friendly surveys:

While all of our standard survey designs are 508 accessible, there are steps you can take as a Survey Designer to make your surveys user-friendly with screen readers and other visual technologies. These tips are especially important if this demographic is your primary response group.

-Screen readers are applications that work by 'reading' the behind-the –scenes coding on a web page. Surveys created by SurveyMonkey include the necessary labeling for screen readers to easily relay page content to users.

-The screen reader will read through each question by first reading the question text, and then listing off the possible answer options. Remember that all of this text is being converted to audio by the program.

-You can test your survey design by reading each question and the corresponding answer options out loud. Questions that can be easily understood when verbalized will be the most comprehensible by screen readers.

2. Web Accessibility Survey Design tips:

a.) Make Questions as concise as possible.

- Excessively long questions with unnecessary information in them can become tedious to listen to. The respondent might even forget the question or previous answer options as they reach the end of the list of possible answers. So keep questions to the point.

b.) Limit the use of Matrix question types and other complex question types.

-The more complex the question structure, the longer the screen-reader will take to move through the question. This also makes it harder for respondents to navigate backward within the question and remember what it is they are being asked. In this case, it is preferable to create longer surveys with a lot of simple questions rather than creating shorter surveys with a few complex questions.

c.) Clearly outline instructions in your Question text field for questions that have specific response requirements.

- Clearly state how many answer choices the respondent will need to select when creating multiple answer question types. For example, *"Please select all options that apply to you" or "Please select no more than 3 options".* This helps clarify what respondents should do while they listen to the list of answer options. It is also helpful to note if the question is required.

d.) Do not add additional HTML in your survey design.

- If your account is HTML enabled, we **do not** recommend that you use HTML coding in the design of your survey. While screen readers are set up to ignore certain types of basic HTML coding, it is not uncommon for a program to interpret pieces of code as part of the label. Adding HTML coding may cause the users software to read aloud the HTML codes that you are entering into your survey.

For example, " Welcome" might be read as "Less than b greater than welcome less than backslash b greater than" in the screen reader.

While this will not necessarily happen with all HTML coding added to your survey design, we recommend that you **do not** add HTML unless you have experience coding with screen readers.

e.) Do not change the colors in the default themes.

- Being 508 compliant includes being accessible to users with visual impairments, such as colorblindness. To make the survey design easily visible to all users, a proper amount of color contrast and brightness has been included within all default themes.

If you would like to change the color scheme but still maintain 508 compliancy, you can access the following site so that you can test your new colors to make sure that they are 508 compatible.

(http://juicystudio.com/services/colourcontrast.php#result)

VI: CONCLUSION

From the suggestions and examples provided in this guide, you can see that creating effective surveys does not have to be an intimidating task! Everyone is capable of designing surveys to gather specific data as accurately as possible. You do not have to be a master designer to accomplish these goals, and the tips and basic guidelines provided here will help you get started in creating effective and accurate surveys.

Web-based surveys ultimately give you the freedom to be creative when designing surveys through the use of colors, logos, images, etc. Don't be afraid to have fun with the design process and create surveys that are visually pleasing and stimulating in content. Implement strategies to increase the survey's response rate by creating clear and brief questions, by providing concise survey instructions, and by indicating how the information collected will be handled. Offer incentives and make sure to deliver on the promised gifts to ensure future survey participation by respondents.

The beauty of web-based surveys is their dynamic quality. You can email a survey invite and receive responses within the same day! As soon as a respondent clicks the "Submit" button on the survey, his/her response comes immediately into the Analyze section of your account. You do not have to deal with the tedious mail process anymore and you no longer have to waste paper to send out hundreds of surveys. Another bonus of the tool is the automatic calculations of the survey data in the Analyze section. Here you will see immediate statistics like percents, response totals, respondent totals, and response averages (for Matrix-Rating types).

Just like anything in life, there are pros and cons to everything you do; even when it comes to using web-based surveys. This guide addresses both sides of the coin. We would like for you to have enough information so you can decide if web-based surveys are right for your data collection needs.

SurveyMonkey is a self-service online survey application. However, we realize that you have busy schedules and may not have the time to dedicate to designing a survey or perhaps you may not be sure where to begin.

In order to alleviate some of the work for you, we do offer a survey design service at an additional cost.

- If you already have a Word or PDF version of your survey, please send it in through our email support center. We will review the design and send you a quote spec sheet.
- Once you register for a Professional account and after we finish building the survey for you, the survey is transferred into your account.

- As the account holder, you will still be responsible for administering the survey and analyzing the data. If you have additional questions in regards to these areas, please don't hesitate to contact us through the email support center.

Now it is time for you to begin creating surveys! Feel free to contact us through our email support center if you have any questions about creating your surveys. You may also want to reference the additional sites listed at the end of this guide for help in designing surveys. Good luck, have fun, and happy data gathering!

Appendix 1

For additional information regarding survey design and writing effective questions, please refer to the following sites:

A. Survey Question Types:

1. **Ezine Articles.com: Closed Ended Questions**

Russell, Michael. "Data Acquisition: Closed-Ended Questionnaire Response Format." *EzineArticles* 01 December 2006. 28 February 2007, from http://ezinearticles.com/?Data-Acquisition:-Closed-Ended-Questionnaire-Response-Format&id=373764.

2. **Encyclopedia of Educational Technology: Types of Survey Questions**

Waddington, H. (2000). "*Types of survey questions*." In B. Hoffman (Ed.), *Encyclopedia of Educational Technology.* Retrieved February 28, 2007, from http://coe.sdsu.edu/eet/Articles/surveyquest/start.htm

3. **Creating Good Interview and Survey Questions**

Driscoll, Dana Lynn (2006). "Creating Good Interview and Survey Questions." Retrieved September 14, 2007, from The Owl at Purdue: http://owl.english.purdue.edu/owl/resource/559/06/

B. General Information on Survey Design:

1. **Rand Corporation: Conducting Research Surveys via E-mail and the Web** (downloadable PDF chapters available)

Matthias, Schonlau, Ronald D. Fricker, Marc N. Elliot (2006). *"Conducting Research Surveys via E-mail and the Web"*. Retrieved February 28, 2007, from Rand Corporation: http://www.rand.org/pubs/monograph_reports/MR1480/index.html

2. **University of Leeds: Guide to the Design of Questionnaires**

Burgess, Dr. Thomas F. (May 2001) "*A General Introduction to the design of questionnaires for survey research*". Retrieved February, 28, 2007, from University of Leeds: http://www.leeds.ac.uk/iss/documentation/top/top2.pdf

C. Sample Size & Survey Statistics:

1. **Statistical Consultant for Doctoral Students and Researchers - Plus, Statistics Tutorials**

Creech, Steve – President (2007). "*Sample Size*". Retrieved March 1, 2007, from Statistical Consultant for Doctoral Students and Researchers: http://www.statisticallysignificantconsulting.com/Sample-Size-Help.htm

2. **University of Iowa: Sample-Size Determination**

Lenth, Russell V. (March, 1 2001) "*Some Practical Guidelines for Effective Sample-Size Determination*". Retrieved March, 1, 2007, from University of Iowa: http://www.stat.uiowa.edu/techrep/tr303.pdf

3. **Wimmer Research: Sample Size Calculator**

Wimmer, Roger (2001) "*Sample Size Calculator*". Retrieved March, 1, 2007, from Roger Wimmer Websites: www.wimmerdominick.com (This is located at the right side of the homepage).

4. **GreatBook: Survey Sample Selection**

Bennekom, Fred Van (2005). "*The Need to Consider your Whole Research Program*". Retrieved March 7, 2007, from GreatBook.com: http://www.greatbrook.com/survey_sample_selection.htm

C. Section 508:

1. RampWeb Web Accessibility Consulting: RampWEB Web Accessibility Consulting

2. RampWeb Web Accessibility Consultant: **Jim Thatcher** (http://www.jimthatcher.com/index.htm)

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